

State of California—Health and Human Services Agency

Department of Health Services



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Severe Acute Respiratory Syndrome (SARS)

Q & A Document for Healthcare Providers State of California DHS 17 March 2003, 1800 PM

What is Severe Acute Respiratory Syndrome or SARS?

SARS is an illness of currently unknown etiology that presents with influenza-like symptoms including fever, myalgias, headache, sore throat, non-productive cough, and sometimes pneumonia by chest x-ray. Some patients with SARS (currently estimated at 10-20%) have developed more severe signs and symptoms, such as shortness of breath, hypoxia, and respiratory distress requiring intubation and mechanical ventilation. Thrombocytopenia and leukopenia have also been reported. To date, there is no evidence linking avian influenza (H5N1) to SARS.

How is SARS defined?

Clinicians should be alert for persons with respiratory illness of unknown etiology with onset since February 1, 2003. The Centers for Disease Control and Prevention are currently defining a **Suspect Case** as:

A person presenting with one or more signs or symptoms of respiratory illness including cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of pneumonia or acute respiratory distress syndrome;

AND fever (>38° C):

AND one or more of the following:

Close contact* within 10 days of onset of symptoms with a person under investigation or suspected of having SARS;

Travel within 10 days of onset of symptoms to an area with documented transmission of SARS (see list).

Note: Suspect cases with either radiographic evidence of pneumonia or respiratory distress syndrome; or evidence of unexplained respiratory distress syndrome by autopsy are designated "probable" cases by the WHO case definition.

* Close contact is defined as having cared for, having lived with or having had direct contact with respiratory secretions and /or body fluids of a patient suspected of having SARS.

List of areas with transmission of SARS: Hong Kong Special Administrative Region and Guangdong province, Peoples' Republic of China; Hanoi, Vietnam; Singapore; and Toronto, Canada.



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What is the incubation period for SARS?

Although information on the clinical course of SARS is rapidly evolving, it is presently believed that the incubation period averages 5-7 days.

Which countries are currently reporting SARS?

SARS was first recognized on the February 26, 2003 in Hanoi, Viet Nam. As of March 17, 2003, countries reporting cases of SARS to WHO include:

- Hong Kong Special Administrative Region of China (95)
- Viet Nam (40)
- Singapore (20)
- Guangdong Province in the People's Republic of China (case numbers unavailable)
- Canada (8)

We have heard of reports of SARS activity in Indonesia, Philippines, and Thailand, but none of these have been officially reported to WHO. There have also been cases of travelers presenting with, and being evaluated for, SARS in the United States of America, Switzerland, and Germany.

Can SARS be fatal?

As of March 17, 2003, fewer than 5 deaths associated with SARS have been reported to WHO from Hong Kong, Viet Nam, and Canada.

Who is at risk for SARS?

As of March 15, 2003, the majority of cases have occurred in people who have had very close contact with other cases and over 90% of cases have occurred in healthcare workers.

How is SARS diagnosed?

Because the etiology for SARS is presently unknown, SARS is currently a **clinical diagnosis** based on the above case definitions. In order to determine the underlying cause of SARS, clinicians are asked to obtain specimens for laboratory diagnostic testing. Basic diagnostic testing should be performed at local hospital and local health department laboratories, while more specialized testing should be referred to state and national public health laboratories. Initial diagnostic testing should include:

- Chest x-ray
- CBC with differential
- Sputum for Gram stain and routine bacterial culture and sensitivity
- Sputum for Legionella culture and Direct Fluorescent Antibody (DFA), and urine for Legionella pneumophila serogroup 1
- Blood cultures
- Nasopharyngeal washings for viral DFA testing and viral culture, specifically testing for influenza A/B, parainfluenza, and respiratory syncytial virus (RSV)

 Acute and convalescent sera for specialized serological studies, including serology for Chlamydia pneumionae and Mycoplasma pneumoniae (interpret results with caution)

Clinicians are asked to remind laboratories not to discard any SARS-related specimens, and to have serum frozen for potential further studies.

What testing is available at State of California DHS Viral and Rickettsial Disease Laboratory (VRDL) for SARS?

For cases of hospitalized patients with pneumonia AND with travel to China, Viet Nam, Indonesia, Philippines, Singapore OR Thailand within 7 days (or with history of close contact with persons with respiratory illness having the aforementioned travel), the State reference laboratories can perform:

- Viral culture for a broad range of pathogens
- PCR* for influenza A/B, parainfluenza, RSV, adenovirus, metapneumovirus, and Mycoplasma
- Acute serum: IgM for Mycoplasma and Chlamydia
- Paired sera: Mycoplasma, Chlamydia, influenza A/B, parainfluenza, RSV, adenovirus

Specimens that test negative for all the above tests will be referred to CDC for further testing.

*These PCR tests are experimental in nature and have not been validated for diagnostic use but may be helpful for epidemiological studies.

How is SARS treated?

As the exact cause of SARS remains unknown, no specific treatment recommendations can be made at this time. For patients with more severe illness, empiric therapy should include coverage for organisms that usually cause community-acquired pneumonia. Healthcare providers are instructed to follow currently available clinical practice guidelines for community-acquired pneumonia (1). Intensive supportive care, including intubation and mechanical ventilation, may be indicated. For patients requiring hospitalization, consultation with infectious disease specialists is recommended.

Reference:

1. Bartlett JG, Dowell SF, Mandell LA, File TM, Musher DM, and Fine MJ. Practice Guidelines for the management of community-acquired pneumonia in adults. Clin Infect Dis 2000;31:347-82.

What infection control measures are indicated with SARS?

If a patient with suspected or probable SARS is admitted to hospital, infection control personnel should be notified immediately. Although the exact route of transmission for the agent which causes SARS is unknown, CDC is currently recommending *airborne* precautions (private isolation room with negative pressure ventilation, and the use of N-95

respirator masks for persons entering the room) as well as *contact precautions* (use of gloves and gowns for contact with the patient or their environment, and handwashing). In addition, *standard precautions* should be followed, with special attention to good hand hygiene. We anticipate that a document with more detailed infection control information will be provided to all hospitals in California by Licensing and Certification on March 18, 2003.

How should cases of SARS be reported?

Healthcare providers and hospitals are asked to **report cases of SARS to local health departments**. When calling the local health department, the following information will assist with the collection of surveillance data:

- Identifiers (name, address, city, county, telephone number, race, sex)
- Day, month and year of birth
- Onset date
- Clinical data
- Clinical status—alive or dead
- If dead, date of death
- If dead, whether an autopsy was performed—yes or no
- Hospitalized—yes or no
- If hospitalized, name of hospital, city, county, and telephone number
- Whether on a mechanical ventilator—yes or no
- Healthcare worker—yes or no
- If healthcare worker, place(s) of employment
- Possible epidemiologic ties to other cases: dates and places for recent travel, dates and type of exposure for those exposed to other ill persons
- Type of specimens available

What travel advisories are currently being recommended?

CDC advises that persons planning elective or nonessential travel to areas affected by the outbreak may wish to postpone their trips until further notice. According to WHO, there is presently no recommendation for people to restrict travel to any destination. Travelers may wish to determine their individual risks for illness by seeking advice from their personal physician or a travel medicine clinic. WHO is now offering limited guidance for travelers, airline crew and airlines. http://www.who.int/mediacentre/releases/2003/pr23/en/

Where can healthcare providers find more information on SARS?

More information is available at the CDC Emergency Operations Center (770) 488-7100. Detailed information can also be found on the internet at:

- http://www.cdc.gov/ncidod/sars/index.htm
- http://www.who.int/en/